

# BACKGROUND PAPER FOR THE TRANSMISSION CORRIDORS AND STRATEGIC PLAN UPDATE WORKSHOP

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**STAFF PAPER**

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# **BACKGROUND PAPER FOR THE TRANSMISSION CORRIDORS AND STRATEGIC PLAN UPDATE WORKSHOP**

## **Introduction**

This background paper is intended to provide information for the Integrated Energy Policy Report (IEPR) Committee's Transmission Corridors and Strategic Plan Update Workshop scheduled for May 19, 2005. The workshop will be held at the Energy Commission's Hearing Room A.

This paper will briefly summarize corridor planning activities and efforts that occurred during the *2004 Energy Report Update* cycle, the recommendations of the *2004 Energy Report* and the activities that are underway in the *2005 Energy Report* cycle. In addition, this paper will also briefly note the strategic planning activities that will be discussed at the workshop. The corridor assessments and strategic planning activities occurring in the *2005 Energy Report* cycle will be documented in staff's *Transmission Staff Report*, currently anticipated to be released in mid-July 2005. The *Transmission Staff Report* will offer policy options for consideration by the Energy Commission for possible inclusion in the *2005 Energy Report* and the Commission's first Transmission Strategic Plan to the legislature as required by Public Resources Code (PRC) section 25324.

## **IEPR Strategic Transmission Planning and Corridor Assessment Overview**

Siting new transmission facilities in California has historically been a complex process involving the interests of multiple stakeholders including utilities, local governments, various state and federal agencies, and the public. As noted in the *2003 Energy Report*, ensuring reliable and reasonably priced electricity supplies – increasingly from renewable resources – depends on a well-maintained and adequate transmission and distribution system. However, before transmission facilities can be successfully sited in a timely fashion, a comprehensive planning process that addresses both physical and economic need, as well as environmental and land use issues, must be developed. A vital component of that process is transmission corridor planning.

The need for a statewide transmission corridor planning process was recognized in the Staff Draft White Paper entitled *Upgrading California's Electric Transmission System: Issues and Actions for 2004 and Beyond* and the *2004 Energy Report Update* as an essential component of ensuring that California develops a healthy transmission system that is capable of integrating renewable resources to meet

future electricity needs and the Renewables Portfolio Standard (RPS) policy goals. The *2004 Energy Report Update* also recommended that the Energy Commission and California Independent System Operator (CA ISO) work collaboratively with the California Public Utilities Commission (CPUC) and various stakeholders, including the investor-owned and publicly owned utilities, to develop a state-led process for assessment of transmission corridor needs. The purpose of this process would be to identify and designate transmission corridors where future transmission expansion projects are anticipated. The *2005 Energy Report* will initiate development of the state-led transmission planning process.

## **2005 IEPR Transmission Corridor Assessment Activities**

### ***Transmission Corridor Presentations – May 19 Workshop***

The *2004 Energy Report Update* highlighted the importance of transmission projects to interconnect renewable resources located in the Tehachapi Wind Resource Area and Imperial County's Geothermal Resource Area. Staff has arranged for the following corridor presentations at the May 19, 2005 workshop:

1. San Diego Gas & Electric's Proposed 500 kV project (Laura McDonald)
2. Pacific Gas & Electric Tehachapi Options (Chifong Thomas)
3. Southern California Edison Transmission and Corridor Planning (Representative from Southern California Edison)
4. Threats to the Bureau of Land Management's Interstate 10 Transmission Corridor (Dwayne Marti or John Kallish)

### ***Transmission Corridor Identification Process***

Staff is attempting to limit the corridor work performed during an IEPR cycle to essential activities required to provide informative recommendations to the Commission for the Transmission Strategic Plan. Staff believes it is not vital or even desirable to actually conduct corridor environmental assessments as part of the IEPR work on an IEPR schedule. Instead, staff's work plan is built on the assumption that it is vital to address four fundamental corridor questions in the IEPR cycle. Answers to these questions developed in the IEPR cycle will serve as the building blocks for the transmission corridor recommendations made in the Strategic Plan. The four questions are:

1. What are the corridor needs of transmission system owners?
2. Given the corridor needs identified by transmission system owners, what are the appropriate priorities assigned to the identified corridors?
3. What are the major institutional issues and government actions necessary to address the issues associated with the identified corridors?
4. Which local agencies are vital participants in identifying environmental and land use issues associated with the identified corridors?

On January 19, 2005, the Energy Commission directed transmission system owners to provide bulk transmission information by April 1, 2005 for use in the *2005 Energy Report*. In early March, staff followed up with a letter to transmission owners requesting that all short- and long-term transmission projects identified in their filings be numerically prioritized, and any additional information about the projects be included if known (e.g., purpose, likely end points, date needed, potential in-state project mileage, range of estimated project costs, identification of stakeholders for which coordination will be necessary, and estimated strategic benefits to California). Staff will use this information in the state-led process to assess and identify corridor needs throughout the state.

Because the involvement of multiple stakeholders is crucial to the assessment of transmission corridors, staff is proposing the establishment of a Corridor Study Group comprised of interested stakeholders, including load serving entities (LSEs), cities, counties, federal agencies, members of the California Biodiversity Council and California Native American governments (see Attachment 1). The Corridor Study Group would assist the Commission in the IEPR cycle by providing input and identifying major physical and institutional issues associated with identified corridors, as well as actions to resolve such issues. Staff briefed the Executive Committee of the Biodiversity Council on March 30, 2005. As a result, staff has made considerable progress identifying agency contacts and personnel that can assist in the identification of issues associated with potential future corridors.

## **Panel Questions**

A stakeholder panel discussion is scheduled for the workshop. Stakeholders are encouraged to provide comments on their experiences with transmission line permitting projects and staff's proposed corridor identification process noted above. In addition, stakeholders are encouraged to respond to the following questions:

1. Does the proposed corridor identification process described above meet stakeholder, state, and local agency and public concerns and needs for state-led transmission planning? If not, what would you propose?
2. How should the collaborative approach recommended in the *2004 Energy Report* be structured?

## **2005 IEPR Strategic Transmission Planning Activities**

In addition to developing state-led transmission corridor planning, beginning with the *2003 Energy Report*, the Energy Commission made several recommendations to improve transmission planning processes. First, the report recognized the need for improvement in the analytical methodologies used for evaluating the costs and benefits of transmission projects. It noted that the analytical planning methodologies available at that time tended to employ short-term analytical horizons, economic methodologies that did not recognize strategic benefits (such as expanded access to

regional markets, enhancement of grid reliability, and insurance against major contingencies), and cost/benefit evaluations that unduly discount long-term project benefits. The report also noted that most analytical approaches assumed average conditions only, and therefore failed to recognize the cost of unforecasted low-probability, high-impact events, and how transmission projects can pay for themselves in just a few years by avoiding the high costs of such events. Furthermore, the report noted the need for the costs and benefits of transmission projects to be compared against alternatives during the planning process.

As part of the *2004 Energy Report Update*, the Energy Commission engaged the CA ISO, CPUC, utilities, and other stakeholders in a series of workshops to address transmission planning issues. By bringing together this diverse group in dialogue, the Energy Commission identified a number of long-term needs and strategies to improve transmission planning in the state. Some of the planning recommendations which are included in the *2004 Energy Report Update* include the following:

1. Assess statewide transmission needs for reliability and economic projects as well as those necessary to achieve statewide policy goals such as the Renewables Portfolio Standard;
2. Approve beneficial transmission infrastructure investments that can move into permitting; and
3. Examine transmission alternatives early in the planning phase, so that the environmental review in the permitting phase can more appropriately focus on routing alternatives and mitigation measures.

Through Senate Bill 1565 (SB 1565, Chapter 692, Statutes of 2004, Bowen), the legislature added section 25324 to the PRC, which elevated the Energy Commission's formal role in transmission planning. It requires the Energy Commission to adopt a strategic plan for the state's electric transmission grid, beginning with the *2005 Energy Report* cycle. The plan must identify and recommend actions required to implement investments needed to ensure reliability, relieve congestion, and meet future growth in load and generation, including renewable resources.

In responding to these policy and legislative directives, Energy Commission staff has initiated several efforts in this *2005 Energy Report* cycle. The results to date will be presented at the May 19 workshop. However, please note that several of these efforts are works in progress, and work will continue beyond the May 19 workshop. The results of these studies will be attached as appendices to the Transmission Staff Report anticipated to be released in mid-July. As such, the IEPR Committee workshop on the Transmission Staff Report, currently anticipated for late July 2005, will provide a forum for interested parties to comment on the *Transmission Staff Report*, as well as to comment on the draft products appended to the *Transmission Staff Report*.

Some of the efforts underway include the following:

1. Analysis of Southern California Edison's recent Devers-Palo Verde 2 Certificate of Public Convenience and Necessity Filing vis à vis the 2003 and 2004 *Energy Report* recommendations;
2. Analysis of Southern California Edison's recent Tehachapi Certificate of Public Convenience and Necessity Filing vis à vis the 2003 and 2004 *Energy Report* recommendations;
3. Analysis of on-going Southern California congestion;
4. Analysis of Los Angeles Department of Water and Power/Southern California Edison (SCE) interconnection;
5. Quantification of operational reliability benefits of economic transmission projects;
6. Development of evaluation criteria for transmission and its alternatives; and
7. Improvements in methodology for assessing the impact of low-probability/high-impact events.

## Attachment 1 – Potential Stakeholders

**PURPOSE:** This attachment recommends a draft list of potential stakeholders that could form the core of the Corridor Study Group.

### Potential Stakeholders

1. California Public Utilities Commission
2. California Independent System Operator
3. Imperial Irrigation District
4. San Diego Gas and Electric/Sempra Utilities
5. Los Angeles Department of Water and Power
6. Southern California Edison
7. Western Area Power Administration
8. Pacific Gas and Electric
9. Sacramento Municipal Utility District
10. California Municipal Utilities Association
11. Northern California Power Agency
12. California Biodiversity Council, which includes the following members:
  - State Level Representation*
  - California Coastal Commission
  - California Coastal Conservancy
  - California Conservation Corps
  - California Department of Transportation
  - California Energy Commission
  - California Environmental Protection Agency
  - California Water Resources Control Board
  - Department of Conservation
  - Department of Fish and Game
  - Department of Food and Agriculture
  - Department of Forestry and Fire Protection
  - Department of Parks and Recreation
  - Department of Water Resources
  - Native American Heritage Commission
  - Resources Agency
  - San Francisco Bay Conservation and Development Commission
  - State Lands Commission
  - University of California, Division of Agriculture and Natural Resources

*Federal Level Representation*

Bureau of Land Management  
Bureau of Reclamation  
Monterey Bay National Marine Sanctuary  
National Marine Fisheries Service  
National Park Service  
U.S. Department of Agriculture, Natural Resources Conservation Service  
U.S. Environmental Protection Agency  
U.S. Fish and Wildlife Service  
U.S. Forest Service  
U.S. Geological Survey  
U.S. Geological Survey, Western Ecological Research Center

*Local Level Representation*

California Association of Resource Conservation Districts  
Central Coast Regional Association of County Supervisors  
North Coastal Counties Supervisors Association  
Northern California Counties Supervisors Association  
Regional Council of Rural Counties  
Sacramento-Mother Lode Regional Association of County Supervisors  
San Diego Association of Governments  
San Joaquin Valley Regional Association of County Supervisors  
South Central Coast Regional Association of County Supervisors  
Southern California Association of Governments

13. US Army Corps of Engineers
14. US Military Branches (Air Force, Army, Marines, Navy)
15. California Manufacturer's and Technology Association
16. League of Women Voters
17. League of California Cities
18. California State Association of Counties